

TAPERED PIEZOELECTRIC IN-PLANE BIMORPH AND METHOD OF FABRICATING

ABSTRACT OF THE DISCLOSURE

Tapered elements fabricated from a substrate of a size many times that of a single element are disclosed. Such tapered elements may be used as piezoelectric microactuators such as in-plane piezoelectric bimorph microactuators. A unique method of fabricating such tapered elements is provided. According to the method, cutting directions are first defined, the substrate is then cut a plurality of times in each cutting direction with adjacent cuts in each cutting direction indexed by proper indexing distances which are determined based on the dimensions of the final tapered elements. In one embodiment of the method, a plurality of optically detectable marks are used to define the cutting directions and cutting means is accordingly optically aligned with the cutting directions.